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PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)		Docket Number (Optional) 034942-000258
<p>First named inventor: Booth, Richard #5</p> <p>Application No.: 10/037,870 Art Unit: 2681</p> <p>Filed: 10/22/01 Examiner: Not Yet Assigned</p> <p>Title: Reduction Of Average-To-Minimum Power Ratio In Communications Signals</p> <p>Attention: Office of Petitions Mail Stop Petition Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 FAX: (703) 308-6916</p> <p>RECEIVED JAN 30 2004</p> <p>OFFICE OF PETITIONS</p> <p>NOTE: If information or assistance is needed in completing this form, please contact Petitions Information at (703) 305-9282.</p> <p>The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action plus any extensions of time actually obtained.</p> <p>APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION</p> <p>NOTE: A grantable petition requires the following items:</p> <p>(1) Petition fee; (2) Reply and/or issue fee; (3) Terminal disclaimer with disclaimer fee -- required for all utility and plant applications filed before June 8, 1995; and for all design applications; and (4) Statement that the entire delay was unintentional.</p> <p>1. Petition fee <input checked="" type="checkbox"/> Small entity - fee \$665.00 (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27. <input type="checkbox"/> Other than small entity - fee \$ _____ (37 CFR 1.17(m))</p> <p>2. Reply and/or fee A. The reply and/or fee to the above-noted Office action in the form of <u>Notice to File Corrected Application Papers</u> (identify type of reply): <input checked="" type="checkbox"/> has been filed previously on <u>7/10/02</u>. <input checked="" type="checkbox"/> is enclosed herewith.</p> <p>B. The issue fee of \$ _____ <input type="checkbox"/> has been paid previously on _____. <input type="checkbox"/> is enclosed herewith.</p>		

[Page 1 of 2]

This collection of information is required by 37 CFR 1.137. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

3. Terminal disclaimer with disclaimer fee

Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.

A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$____ for a small entity or \$____ for other than a small entity) disclaiming a period equivalent to the period of abandonment is enclosed herewith (see PTO/SB/63).

4. Statement. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D))].

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

January 21, 2004

Date

Signature

Telephone
Number: (408) 292-5800

Adrienne yeung

Typed or printed name

THELEN REID & PRIEST, LLP

Address

P.O. Box 640640

San Jose, CA 95164-0640

Address

Enclosures: Fee Payment

Copy of Reply dated 7/10/02

Terminal Disclaimer Form

Additional sheets containing statements establishing unintentional delay

Other : Postcard, 47 Formal Drawings (22 pages), Copy of Notice of Abandonment dated 12/12/03

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(A)]

I hereby certify that this correspondence is being:

deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

transmitted by facsimile on the date shown below to the Patent and Trademark Office at (703) 308-6916.

January 23, 2004

Date

Signature

Ruth Rodriguez

Typed or printed name of person signing certificate



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/037,870	10/22/2001	Richard W. D. Booth	034942-258

Robert E. Krebs
 Thelen Reid & Priest LLP
 P.O. Box 640640
 San Jose, CA 95164-0640

RECEIVED
 JAN 30 2004
 OFFICE OF PETITIONS

CONFIRMATION NO. 4801
 ABANDONMENT/TERMINATION
 LETTER



OC000000011479839

Date Mailed: 12/12/2003

NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 03/15/2002.

- No reply was received.

A petition to the Commissioner under 37 CFR 1.137 may be filed requesting that the application be revived.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(l); and (4) a terminal disclaimer if required by 37 CFR 1.137(d).

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL DELAY** must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d).

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (703) 305-9282. Petitions should be mailed to: Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20231
 www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/037,870	10/22/2001	Richard W. D. Booth	111022NLF.US

30233
 TROPIAN INC.
 20813 STEVENS CREEK BLVD.
 CUPERTINO, CA 95014

CONFIRMATION NO. 4801

FORMALITIES LETTER



OC00000007652939

Date Mailed: 03/15/2002

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

This application has been accorded an Application Number and Filing Date. The application, however, is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given **TWO MONTHS** from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52 because:
 - Line spacing on the specification, claims, or abstract is not 1-1/2 or double spaced (See 37 CFR 1.52(b)).
- An abstract was not provided for this application. An abstract of the technical disclosure is required under 37 CFR 1.72(b).

*A copy of this notice **MUST** be returned with the reply.*

Arida Gilton
 Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



#6

Please type a plus sign (+) inside this box →

Approved for use through 09/30/2000. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>		Application Number 10/037,870
		Filing Date 10/22/01
		First Named Inventor BOOTH
		Group Art Unit _____
		Examiner Name _____
Total Number of Pages in This Submission _____		Attorney Docket Number 111022NLF.US

ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input checked="" type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers <i>(for an Application)</i> <input checked="" type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> Request for Refund	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group <i>(Appeal Notice, Brief, Reply Brief)</i> <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Additional Enclosure(s) <i>(please identify below):</i> <div style="border: 1px solid black; padding: 5px; width: 100%;">Remarks</div>
RECEIVED JAN 30 2004 OFFICE OF PETITIONS		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Michael J. Ure
Signature	
Date	7/10/02

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: 7/10/02	
Typed or printed name	Michael J. Ure
Signature	
Date	7/10/02

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$ 200)

Complete If Known

Application Number	10/037,870
Filing Date	10/22/01
First Named Inventor	BOOTH
Examiner Name	
Group Art Unit	
Attorney Docket No.	111022NLF.US

METHOD OF PAYMENT

1. The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
 Deposit Account Number **50-1788**
 Deposit Account Name **TROPIAN INC.**

Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
 Applicant claims small entity status. See 37 CFR 1.27

2. Payment Enclosed:
 Check Credit card Money Order Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)	Fee Code (\$)		
101 710	201 355	Utility filing fee			
106 320	206 160	Design filing fee			
107 490	207 245	Plant filing fee			
108 710	208 355	Reissue filing fee			
114 150	214 75	Provisional filing fee			

SUBTOTAL (1) (\$)

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20** =	<input type="text"/>	<input type="text"/>
Multiple Dependent	- 3** =	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>

Large Entity Small Entity

Fee Code (\$)	Fee Code (\$)	Fee Description
103 18	203 9	Claims in excess of 20
102 80	202 40	Independent claims in excess of 3
104 270	204 135	Multiple dependent claim, if not paid
109 80	209 40	** Reissue independent claims over original patent
110 18	210 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

3. ADDITIONAL FEES		Fee Description		Fee Paid
Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Description	
105 130	205 65	Surcharge - late filing fee or oath		
127 50	227 25	Surcharge - late provisional filing fee or cover sheet		
139 130	139 130	Non-English specification		
147 2,520	147 2,520	For filing a request for ex parte reexamination		
112 920*	112 920*	Requesting publication of SIR prior to Examiner action		
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action		
115 110	215 55	Extension for reply within first month		
116 390	216 195	Extension for reply within second month		200
117 890	217 445	Extension for reply within third month		
118 1,390	218 695	Extension for reply within fourth month		
128 1,890	228 945	Extension for reply within fifth month		
119 310	219 155	Notice of Appeal		
120 310	220 155	Filing a brief in support of an appeal		
121 270	221 135	Request for oral hearing		
138 1,510	138 1,510	Petition to institute a public use proceeding		
140 110	240 55	Petition to revive - unavoidable		
141 1,240	241 620	Petition to revive - unintentional		
142 1,240	242 620	Utility issue fee (or reissue)		
143 440	243 220	Design issue fee		
144 600	244 300	Plant issue fee		
122 130	122 130	Petitions to the Commissioner		
123 50	123 50	Petitions related to provisional applications		
126 240	126 240	Submission of Information Disclosure Stmt		
581 40	581 40	Recording each patent assignment per property (times number of properties)		
146 710	246 355	Filing a submission after final rejection (37 CFR § 1.129(a))		
149 710	249 355	For each additional invention to be examined (37 CFR § 1.129(b))		
179 710	279 355	Request for Continued Examination (RCE)		
169 900	169 900	Request for expedited examination of a design application		
Other fee (specify)				

*or number previously paid, if greater; For Reissues, see above

Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

SUBMITTED BY

Name (Print/Type)	Michael J. Ure	Registration No. (Attorney/Agent)	33,089	Telephone	(408) 865-1300
Signature				Date	7/10/02

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PTO/SB/22 (12-97)

Approved for use through 9/30/00. OMB 0651-0031
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional)
111022NLF.US

In re Application of BOOTH	
Application Number 10/037,870	Filed 10/22/01
For Reduction of average-to-minimum power ratio in commu	
Group Art Unit	Examiner

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a response in the above identified application.

The requested extension and appropriate non-small-entity fee are as follows
(check time period desired):

<input type="checkbox"/>	One month (37 CFR 1.17(a)(1))	\$ _____
<input checked="" type="checkbox"/>	Two months (37 CFR 1.17(a)(2))	\$ <u>400</u>
<input type="checkbox"/>	Three months (37 CFR 1.17(a)(3))	\$ _____
<input type="checkbox"/>	Four months (37 CFR 1.17(a)(4))	\$ _____
<input type="checkbox"/>	Five months (37 CFR 1.17 (a)(5))	\$ _____

Applicant is a small entity under 37 CFR 1.9 and 1.27, therefore the fee amount shown above is reduced by one-half, and the resulting fee is: \$ 200

A small entity statement under 37 CFR 1.27:

<input type="checkbox"/>	is enclosed.
<input type="checkbox"/>	has already been filed in this application.
<input type="checkbox"/>	A check in the amount of the fee is enclosed.
<input type="checkbox"/>	The Commissioner has already been authorized to charge fees in this application to a Deposit Account.
<input checked="" type="checkbox"/>	The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>50-1788</u> . I have enclosed a duplicate copy of this sheet.

I am the assignee of record of the entire interest.

applicant.

attorney or agent of record.

attorney or agent under 37 CFR 1.34(a).

Registration number if acting under 37 CFR 1.34(a). _____.

7/10/02

Date

Signature

Michael J. Ure

Typed or printed name

Burden Hour Statement: This form is estimated to take 0.1 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

What is claimed is:

1. A method of altering a communications signal to reduce an average-to-minimum power ratio thereof, the communications signal being formed using pulse-shaping techniques applied to instances of a pulse of a given form, the method comprising, for at least one signal component:
 - setting a desired signal minimum;
 - identifying a time instant in the vicinity of which the signal is likely to fall below the desired signal minimum;
 - using a mathematical model of the communications signal in a time interval said time instant, determining a minimum of the communications signal during said time interval;
 - determining a measure of at least one of magnitude and phase of the communications signal corresponding to the minimum of the communications signal during said time interval; and
 - if said minimum of the communications signal is less than a desired signal minimum:
 - in accordance with said one of magnitude and phase, forming a scaled corrective pulse; and
 - adding to the signal component the scaled corrective pulse, in timed relation to the signal, to form a modified communications signal having a reduced average-to-minimum power ratio.
2. The method of Claim 1, comprising repeating said identifying, determining, forming and adding steps to form from the modified communications signal a further modified communications signal.
3. The method of Claim 1, comprising determining a measure of both magnitude and phase of the communications signal at said approximate time instant.
4. The method of Claim 3, comprising:
 - calculating values of the communication signal at a small number of points near said approximate time instant; and

fitting a mathematical function to the values.

5. The method of Claim 4, wherein the communications signal is represented within a signal plane having an origin denoting a signal of zero magnitude, and determining a measure of magnitude comprises determining within the signal plane a point of intersection between said function and an intersecting line that bears a predetermined relationship to the function and that includes the origin.
6. The method of Claim 5, wherein the small number of points is two, and the mathematical function is a spanning line that spans a distance between the two points..
7. The method of Claim 6, comprising determining a value representing a straight-line distance between said points.
8. The method of Claim 7, wherein the value representing the straight- line distance value is computed using a function.
9. The method of Claim 7, wherein the value 1 is used to represent the straight- line distance value.
10. The method of Claim 7, wherein the measure of the phase of the communications signal at the approximate time instant is represented by a trigonometric function of the phase.
11. The method of Claim 10, wherein the trigonometric function is computed using said straight-line distance value.
12. The method of Claim 11, wherein the trigonometric function is approximated by:
 - performing multiple comparison operations; and
 - based on results of the comparison operations, selecting one of multiple pre-stored values.

13. The method of Claim 12, comprising deriving from said points a line segment lying within a first quadrant of the signal plane, wherein the comparison operations compare a slope of the line segment with multiple predetermined slopes.
14. The method of Claim 12, comprising deriving from said points a line segment lying within a first quadrant of the signal plane, wherein the comparison operations comprise applying successive rotations to the line segment and, after each rotation, applying a binary criterion to a location of the line segment in the complex plane.
15. A method of altering a communications signal to reduce a average- to- minimum power ratio thereof, the communications signal being represented in polar form having a magnitude component and a phase-related component, the method comprising, for at least one signal component:
 - setting a desired signal minimum;
 - identifying a time instant at which the signal falls below the desired signal minimum; and
 - adding to the signal component a corrective pulse, in timed relation to the signal, to form a modified communications signal having a reduced average-to- minimum power ratio.
16. The method of Claim 15, wherein phase is the phase-related component, comprising, during a time interval in which the phase of the communications signal changes from a first value to a second value, interpolating between actual phase values and a line extending between the first value and the second value.
17. The method of Claim 15, wherein the signal component is phase-related, comprising:
 - adding to the signal component two corrective pulses that together have a negligible effect on the signal component outside a limited period of time.

18. A method of altering a communications signal to reduce a average- to- minimum power ratio thereof, comprising:

- performing conditioning of the communications signal in a first domain to form a modified communications signal; and
- performing conditioning of the modified communications signal in a second domain to form a further modified communications signal;
- wherein the first domain is one of a quadrature domain and a polar domain, and the second domain is a different one of the quadrature domain and the polar domain.

19. The method of Claim 6, wherein the intersecting line is orthogonal to the spanning line.

20. The method of Claim 6, wherein the communications signal is formed in accordance with a signal constellation in which at least two signal points are located at different distances from the origin in the complex plane, and wherein identifying a time instant in the vicinity of which the signal is likely to fall below the desired signal minimum comprises:

dividing a straight-line distance along a transition line between two constellation points into two ratioed portions based on a point of intersection of the transition line with a normal passing through the origin.

ABSTRACT OF THE DISCLOSURE

This invention, generally speaking, modifies pulse amplitude modulated signals to reduce the ratio of average power to minimum power. The signal is modified in such a manner that the signal quality remains acceptable. The signal quality is described in terms of the Power Spectral Density (PSD) and the Error Vector Magnitude (EVM).

JAN 26 2004
PATENT & TRADEMARK OFFICE 42

1/22

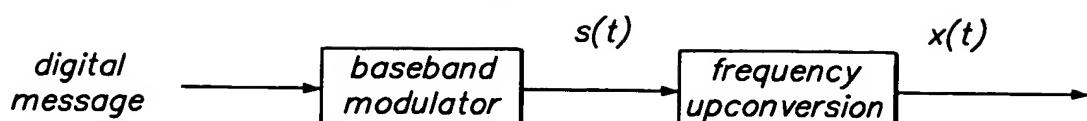


FIG. 1

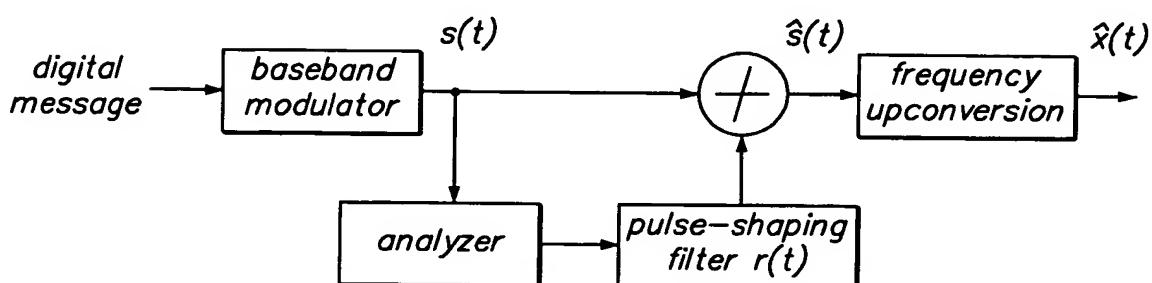


FIG. 2A

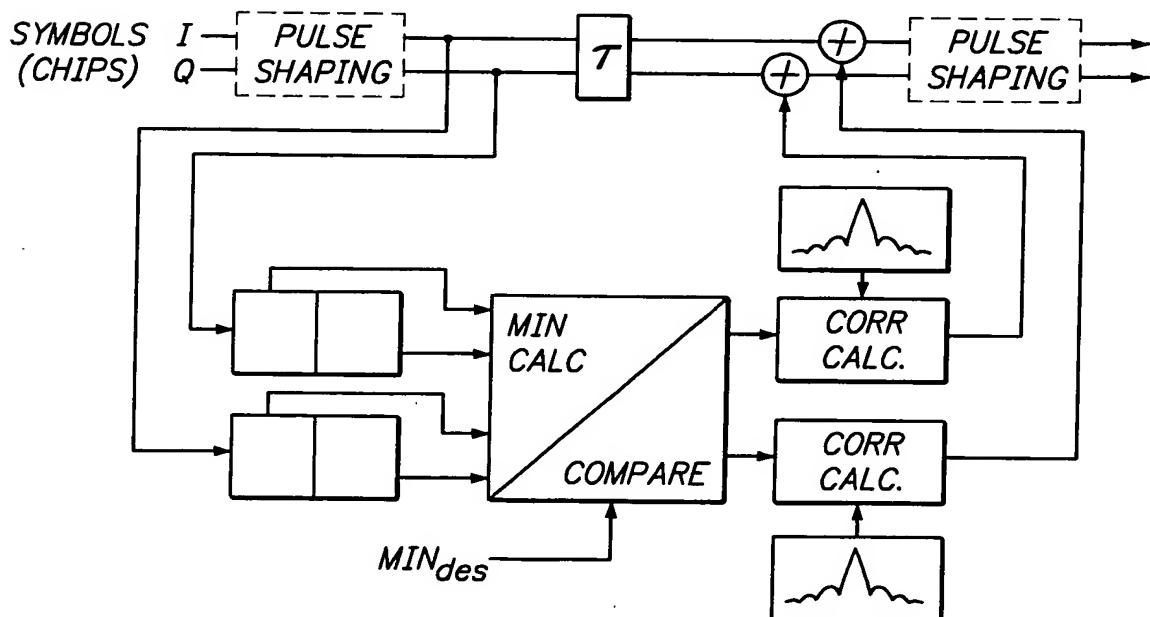


FIG. 2B